

Spotlight Session 2 Plan - England



Title	Chartwells Spotlight Session 2	Term	Date:
	Digestion		

The National Curriculum requirement is ...

Science

- Year 3 - Science (Humans) – Identify that humans get nutrition from what they eat, and humans need the right types and amount of nutrition.
- Year 4 - Science (Humans) – How different parts of the body have special functions and to be able to describe the simple functions of the basic parts of the digestive system.
- Year 5 - Science (Humans) – Identify the main body parts associated with the digestive system and describe the ways in which nutrient and water are transported through the body.
- Year 6 - Science (Humans) – Recognise the impact of diet, exercise, drugs and lifestyle on the way the bodies function and describe the functions of the heart, blood and blood vessels.

Design & Technology (Cooking and Nutrition)

- Understand and apply the principles of a healthy and varied diet.

RSE

- Know what consists of a healthy diet and understanding nutritional content.

Key Vocabulary	Key Concepts	Key People
Types of teeth – molar, incisor, pre-molar, canine, saliva, enzymes, taste buds.	Health and Wellbeing: Understanding how nutrition and oral health impact well-being.	Presenter (Katy Ashworth) Nutritionist Chef
Digestion – Digestive system, enzymes, mouth, oesophagus, stomach, small intestine, large intestine.	Science and Technology: Describe the digestive system and how food is broken down for nutrients.	Dental hygienist – if talking in more depth about oral health
Balanced Diets – Balance, fibre, carbohydrates, fruit, vegetables, beans, pulses, legumes, seeds, nuts, protein, fat.		

If you feel unsure on any of these topics, here are some links that may help you have wider conversations with your pupils during discussions:

Oral Health

<https://www.nhs.uk/live-well/healthy-teeth-and-gums/taking-care-of-childrens-teeth/>

<https://www.bbc.co.uk/bitesize/articles/z8784xs#zmqtrd>

Digestion

<https://www.bbc.co.uk/bitesize/articles/zr84q7h>

<https://www.bda.uk.com/resource/fibre.html#:~:text=Fibre%20is%20essential%20for%20your,2%20diabetes%20and%20bowel%20cancer.>

Healthy Balanced Diets

https://assets.publishing.service.gov.uk/media/5ba8a50540f0b605084c9501/Eatwell_Guide_booklet_2018v4.pdf

<https://www.nhs.uk/live-well/eat-well/how-to-eat-a-balanced-diet/eating-a-balanced-diet/>

<https://www.nutrition.org.uk/creating-a-healthy-diet/a-healthy-balanced-diet/>

Resources Available for Activities:

We have prepared a range of different activities which are ready for you to use. You will be able to choose the activities (and activity level) that will fit your pupils the best to help engage them in learning about their digestive system.

Paper-based Activities

- Teeth/ Oral Health/ Taste Buds (4 options for different learning styles)
- Digestive System Basic Organs (3 options for different learning styles)
- Healthy Diets and Foods High in Fibre (3 options for different learning styles)

Practical Activities

- Seeing your taste buds (permission from parents required)
- Eggs in acid
- Digestive system visual experiment
- Taste testing high fibre foods

Knowledge Retention Quizzes

- Lower KS2 – Teeth Quiz, Organ Identification Quiz and Highest Fibre Content Quiz
- Upper KS2 – Recap of Part 1, Part 2 and Part 3 with expansion into new topics

Year 3 – Spotlight Session 2: The Digestive System



Objective: Can I investigate the foods that will support my digestive system?

Part 1

Engage the pupils in a short discussion around what they know about their digestive system, and what foods they think can help support their digestive health.

- **Engage Pupils with a Video:** Show Part 1 Video
- **Recommended Activity:** Taste Buds Experiment (we recommend that a letter/email is sent home to get parent/carer to get consent for the food colouring experiment)
 - The mouth is the first stage of the digestive system, and is the only stage of the digestive system that we can see with our eyes. Beyond aiding with digestion, the taste buds that are present on our tongue help us detect different flavours, including sweet, salty, savoury/umami, sour and bitter.
 - In this activity, your pupils should be able to highlight their taste buds and be able to inspect them using a mirror.
 - If this activity is not appropriate, please use the quiz on teeth, or the worksheet for teeth

Part 2

- **Engage Pupils with a Video:** Show Part 2 Video
- **Recommended Activity:** Fibre Identification Quiz
 - **Discuss Quiz:**
 - Gather ideas from pupils on how they could improve their fibre intake at lunchtime, record them on the interactive whiteboard (IWB).
 - Note: Children between 5 and 11 years old need 20g of fibre per day. Easy ways to increase their fibre levels is by having wholegrain carbohydrates, vegetables and fruit.
 - Information regarding the quiz:
 - All information is recorded in portion sizes that would be offered to them at lunch time, for example, 1 of their 5 a day would be 60g of a vegetable. This can be used to show how eating vegetables and wholegrains can easily help you reach your fibre target!

Part 3

- **Engage Pupils with a Video:** Show Part 3 Video
- **Recommended Activity:** Practical Activity – Tasting - Please be aware of any allergies or intolerance and avoid those foods
 - Before the activity begins, remind the pupils that it is okay if they don't like any of the ingredients, and that no-one is going to force them to try anything. However, it is really important that we actively try new foods, as our taste buds change with time, and foods they used to not like may taste different now.
 - It is okay to not like a food, but it is not okay to put other pupils off trying the food because of our personal opinion.
 - If you plan this activity in advance, you may be able to source some of the ingredients through the catering team at the school.
 - We recommend that you pick foods from different groups for your pupils to try (pick at least 3 ingredients):
 - **Beans and pulses:** Baked beans, chickpeas, peas
 - **Seeds:** Sunflower seeds or pumpkin seeds
 - **Vegetables:** Broccoli, carrots, sweetcorn
 - **Carbohydrates:** Wholegrain pasta, wholegrain rice, wraps (cut into small pieces)
 - Ask the pupils to evaluate the tastes and flavours of the foods. We recommend letting pupils sip water between each food they taste to clear their palate.
 - Provide our sensory evaluation sheet to ask pupils to explain the look, smell, taste and texture of what they try. Recommend 1 per pupil.
 - Alternative activity is 'Worksheet for Healthy Diets'

Plenary

- Record any worksheets in their books (you can use the worksheets as follow up activities)
- Discuss as a class: "What can we do to increase the amount of fibre we eat?"

Year 4 – Spotlight Session 2: The Digestive System



Objective: Can I investigate the digestive system?

Part 1

Start the lesson by asking: "What do you think the digestive system is? What does it help us with?"

Discuss how the digestive system works as a team of organs to process food, and they are going to learn all about the processing of food in the following videos.

- **Engage Pupils with a Video:** Show Part 1 Video
- **Recommended Activity:** Teeth Identification Quiz
 - Explain that different teeth have different jobs (e.g., molars grind food, incisors cut).
 - Discuss the importance of caring for baby teeth even though they eventually fall out. Ask: "Why do we need to keep our teeth healthy?"
 - *You can also use the Teeth Worksheet: You can choose the difficulty to support different learning needs.*

Part 2

- **Engage Pupils with a Video:** Show Part 2 Video
- **Recommended Activity:** Worksheet for the digestive system
 - Provide Pupils with the worksheet where they will correctly label the parts of the digestive system. Key vocabulary is listed on the worksheets, to different learning levels, and scalable options are available too.
 - Answers to written questions should involve the following themes:
 1. The digestive system is important because it helps break down food into nutrients our body can absorb. These nutrients give our body energy, fuel us, help us grow, and keep us healthy.
 2. A balanced diet helps the digestive system because it gives the body nutrients to help provide us with the energy and fuel we need to grow. Eating foods high in fibre is important as it helps prevent constipation and feeds the good bacteria in our digestive system.

Part 3

- **Engage Pupils with a Video:** Show Part 3 Video
- **Recommended Activity:** Practical Activity – Tasting - **Please be aware of any allergies or intolerance and avoid those foods**
 - Before the activity begins, remind the pupils that it is okay if they don't like any of the ingredients, and that no-one is going to force them to try anything. However, it is really important that we actively try new foods, as our taste buds change with time, and foods they used to not like may taste different now.
 - It is okay to not like a food, but it is not okay to put other pupils off trying the food because of our personal opinion.
 - If you plan this activity in advance, you may be able to source some of the ingredients through the catering team at the school.
 - We recommend that you pick foods from different groups for your pupils to try (pick at least 3 ingredients):
 - **Beans and pulses:** Baked beans, chickpeas, peas
 - **Seeds:** Sunflower seeds or pumpkin seeds
 - **Vegetables:** Broccoli, carrots, sweetcorn
 - **Carbohydrates:** Wholegrain pasta, wholegrain rice, wraps (cut into small pieces)
 - Ask the pupils to evaluate the tastes and flavours of the foods. We recommend letting pupils sip water between each food they taste to clear their palate.
 - Provide our sensory evaluation sheet to ask pupils to explain the look, smell, taste and texture of what they try. Recommend 1 per pupil.
 - Alternative activity is 'Worksheet for Healthy Diets'

Plenary

- Record any worksheets in their books (you can use the worksheets as follow up activities)
- Ask Pupils to write a brief paragraph that outlines the journey of food through the digestive system, ensuring they use precise scientific terminology. This activity will help them solidify their understanding of how the system works and the function of each organ involved.

Year 5 – Spotlight Session 2: The Digestive System

BEYOND
the
Chartwells
KITCHEN



Objective: Can I investigate the digestive system?

Part 1

Start the lesson by asking: "What do you think the digestive system is? What does it help us with?"

Discuss how the digestive system works as a team of organs to process food, and they are going to learn all about the processing of food in the following videos.

- **Engage Pupils with a Video:** Show Part 1 Video
- **Recommended Activity:** Worksheet for Teeth, choose the worksheet that best suits their needs.
 - Explain that different teeth have different jobs (e.g., molars grind food, incisors cut).
 - Addition - You can also use the Teeth Identification Quiz under Yr4 to reveal the answers to your pupils.

Part 2

- **Engage Pupils with a Video:** Show Part 2 Video
- **Recommended Activity:** Knowledge Retention Quiz Part 2
 - There are three questions listed, so you can choose three tables to provide answers, or take answers openly.
 - Engage the pupils in the discussion slides that follow every answer, to help them expand on their knowledge of the subject.
 - Question 3 talks about high fibre foods, if the pupils ask, children between 5 and 11 years old need 20g of fibre per day. The Yr3/Yr4 Quiz on Fibre in Foods can help you address how you can reach your fibre goal easily if you are eating wholemeal carbohydrates, carbohydrates, fruits and vegetables. All calculations are done from the government dataset (McCance and Widdowson) and School Food Standards portion guidelines.

Part 3

- **Engage Pupils with a Video:** Show Part 3 Video
- **Recommended Activity:** Practical Activity – Tasting - **Please be aware of any allergies or intolerance and avoid those foods**
 - Before the activity begins, remind the pupils that it is okay if they don't like any of the ingredients, and that no-one is going to force them to try anything. However, it is really important that we actively try new foods, as our taste buds change with time, and foods they used to not like may taste different now.
 - It is okay to not like a food, but it is not okay to put other pupils off trying the food because of our personal opinion.
 - If you plan this activity in advance, you may be able to source some of the ingredients through the catering team at the school.
 - We recommend that you pick foods from different groups for your pupils to try (pick at least 3 ingredients):
 - **Beans and pulses:** Baked beans, chickpeas, peas
 - **Seeds:** Sunflower seeds or pumpkin seeds
 - **Vegetables:** Broccoli, carrots, sweetcorn
 - **Carbohydrates:** Wholegrain pasta, wholegrain rice, wraps (cut into small pieces)
 - Ask the pupils to evaluate the tastes and flavours of the foods. We recommend letting pupils sip water between each food they taste to clear their palate.
 - Provide our sensory evaluation sheet to ask pupils to explain the look, smell, taste and texture of what they try. Recommend 1 per pupil.
 - Alternative activity is 'Worksheet for Healthy Diets'

Plenary

- Record any worksheets in their books (you can use the worksheets as follow up activities)
- Ask Pupils to write a brief paragraph that outlines how our digestive system is important for absorbing nutrients into our body, ensuring they use precise terminology. This activity will help them solidify their understanding of how the system works and the function of each organ involved.



Year 6 – Spotlight Session 2: The Digestive System

Objective: Can I investigate the digestive system?

Part 1

Start the lesson by asking: "What do you think the digestive system is? What does it help us with? Do you know how you can support your digestive system?"

Discuss how the digestive system works as a team of organs to process food, and they are going to learn all about the processing of food in the following videos.

- **Engage Pupils with a Video:** Show Part 1 Video
- **Recommended Activity:** Knowledge Retention Quiz Part 1
 - There are three questions listed, so you can choose three tables to provide answers, or take answers openly.
 - Engage the pupils in the discussion slides that follow every answer, to help them expand on their knowledge of the subject.
 - Question three: Some taste profiles take some getting used to, such as bitterness and sourness... If you have not been eating bitter foods from a young age then they can take a while to get used to, including foods such as vegetables, natural yoghurts (like kefir) and coffee. Remind the pupils that repeatedly trying foods, even if we don't think we will like it is very important.
 - Umami is a meaty flavour which is normally very appetising to us... Most meats, cheese, mushrooms and soy foods (e.g. soy sauce) will have strong umami flavours, and this provides a richness to food.

Part 2

- **Engage Pupils with a Video:** Show Part 2 Video
- **Recommended Activity:** Egg and Acid Experiment (you can call it an eggsperiment if you want)
 - You can pre-organise this experiment, where your pupils only see the outcome, but we would recommend having them involved in the whole process. If you are using clear liquids like white vinegar, you may see an immediate reaction with the enamel on the egg, which will give a good description of how strong our stomach acid is for digesting our food.
 - Guide Pupils in writing a detailed conclusion based on their observations, including how our stomach acid can help break down structures to make our food more easily digestible for our intestines.
 - You can link this experiment into oral health, talking about how when we consume food, it will soften the enamel that protects our teeth, this is why it is important to only eat high sugar foods occasionally, as it creates an acidic environment in the mouth.
 - Further information on the stomach here: <https://youtu.be/5vT6JxFBktw?si=dVRtvr7iZdDWmzQ3&t=248>
 - Further information on stomach acid with an experiment here (warning it mentions and 'shows' sick): <https://youtu.be/5vT6JxFBktw?si=dBmU3uHyE2ghN-Qt&t=342>

Part 3

- **Engage Pupils with a Video:** Show Part 3 Video
- **Recommended Activity:** Practical Activity – Tasting - **Please be aware of any allergies or intolerance and avoid those foods**
 - Before the activity begins, remind the pupils that it is okay if they don't like any of the ingredients, and that no-one is going to force them to try anything. However, it is really important that we actively try new foods, as our taste buds change with time, and foods they used to not like may taste different now.
 - It is okay to not like a food, but it is not okay to put other pupils off trying the food because of our personal opinion.
 - If you plan this activity in advance, you may be able to source some of the ingredients through the catering team at the school.
 - We recommend that you pick foods from different groups for your pupils to try (pick at least 3 ingredients):
 - **Beans and pulses:** Baked beans, chickpeas, peas
 - **Seeds:** Sunflower seeds or pumpkin seeds
 - **Vegetables:** Broccoli, carrots, sweetcorn
 - **Carbohydrates:** Wholegrain pasta, wholegrain rice, wraps (cut into small pieces)
 - Ask the pupils to evaluate the tastes and flavours of the foods. We recommend letting pupils sip water between each food they taste, to clear their palates.
 - Provide our sensory evaluation sheet to ask pupils to explain the look, smell, taste and texture of what they try. Recommend 1 per pupil.
- **Recommended Activity:** Worksheet for Healthy Diet/Lifestyles
 - After the activity, bring the class together to discuss the digestive system, and how the food we eat can be important for the health of our body.
 - Ask the pupils to fill out the 'Worksheet for Healthy Diet', choose a worksheet that best fits the learning style of your class, and then review some of the answers and examples given as a class. Ask: 'What foods do you think are high in fibre' (HINT: Anything that is a carbohydrate, fruit, vegetable, beans, pulse, legume, seed or nut will normally be high in fibre!), then ask, 'With this in mind, what meal did you plan that uses two high fibre foods?'
 - Examples: Jacket Potato with baked beans, Spaghetti Bolognese (using vegetables in the sauce like onions, mushrooms and tomatoes), Vegetable Curry with Rice (chickpeas or lentils in the curry with rice on the side)

Plenary

- Record any worksheets in their books (you can use the worksheets as follow up activities)
- Ask Pupils to write a brief paragraph that outlines the journey of food through the digestive system, ensuring they use precise scientific terminology. This activity will help them solidify their understanding of how the system works and the function of each organ involved.